

***Cyperus odoratus* L. (Cyperaceae) A newly recorded Species in India**

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Abstract: *Cyperus*, comprising about 600 species in the world, is a large genus of the family Cyperaceae. In the course of our botanical inventory, *Cyperus odoratus* L., heretofore unknown in India, was collected at foothill of Pacchaimalai hills, Eastern ghats, Taminadu, India. This species is native to America and morphologically resembles *C. strigosus* L. except the subcylindrical spikelets. This report provides a description, line drawings, and colored photographs taken from the wild to aid in identification.

Keywords: *Cyperus odoratus* L.,Cyperaceae, Newly recorded Species, India.

INTRODUCTION

Cyperus is the largest genus of about 600 species of sedges (Cyperaceae) followed by *Carex*, distributed in both tropical and temperate regions except the land that is covered with ice. The genus *Cyperus* found associated with wet and marshy locations and *Cyperus helferi* Boeck. is the only species known to live in submerged condition. *Cyperus odoratus* L. is native of North America also reported from South America, Africa, Australia and Asian countries like Japan, Myanmar, Thailand, Vietnam, Indonesia, Malaysia, Papua New Guinea and Philippines. Commonly it is known as Fragrant flat sedge, Rusty flat sedge and Calingale. It is usually among the most common *Cyperus* species throughout its range.

Hooker (1879)¹ reported 73 species of *Cyperus* from India while Nair and Henry (1983)² reported 64 species from Tamilnadu. *C. odoratus* L. has not been recorded in earlier works such as Clarke (1973)³, Sanjay Kumar *et al.*, (1997)⁴, Gopalakrishnan Bhat & Nagendran (2001)⁵ and Prasad & Singh (2002)⁶. It is collected for the first time from India, hence it forms new report to India.

Morphologically it is much similar to *C. strigosus* L. in most of the features except having subcylindrical spikelet and the nut being oblong in shape. Desvaux created a new subgenus *Torulanium* under the genus *Cyperus* (Hamilton, 1825)⁷. Koyama (1976)⁸ too accepted the status of *Torulanium* but later it was merged with the *Cyperus*. The leaf and bracts are grazed by goat and cattle. It is associated with a mat of *Eriochola procera* (Retz.) C.E. Hubb., *Paspalidium geminatum* (Forssk.) Stapf, *Paspalum* sp., and *Typha angustata* Bory & Chaub.

TAXONOMIC TREATMENT

Cyperus odoratus L., Sp. Pl. 1: 46. 1753; *C. acicularis* (Schrad. ex Nees) Steud. D'Arcy, W.G. Monogr. Syst. Bot. Missouri Bot. Gard. 17(1):1-328. 1987; *Torulinium odoratum* (L.) S.S. Hooper, Stevens, W. D et al., Monogr. Syst. Bot. Missouri Bot. Gard. 85: i-xlii, 1--2666. 2001; *T. ferax* (Rich.) Urb. Hokche, O. et al, Nuev. Cat. Fl. Vas. Venezuela 1-860. 2008.(Fig.1)

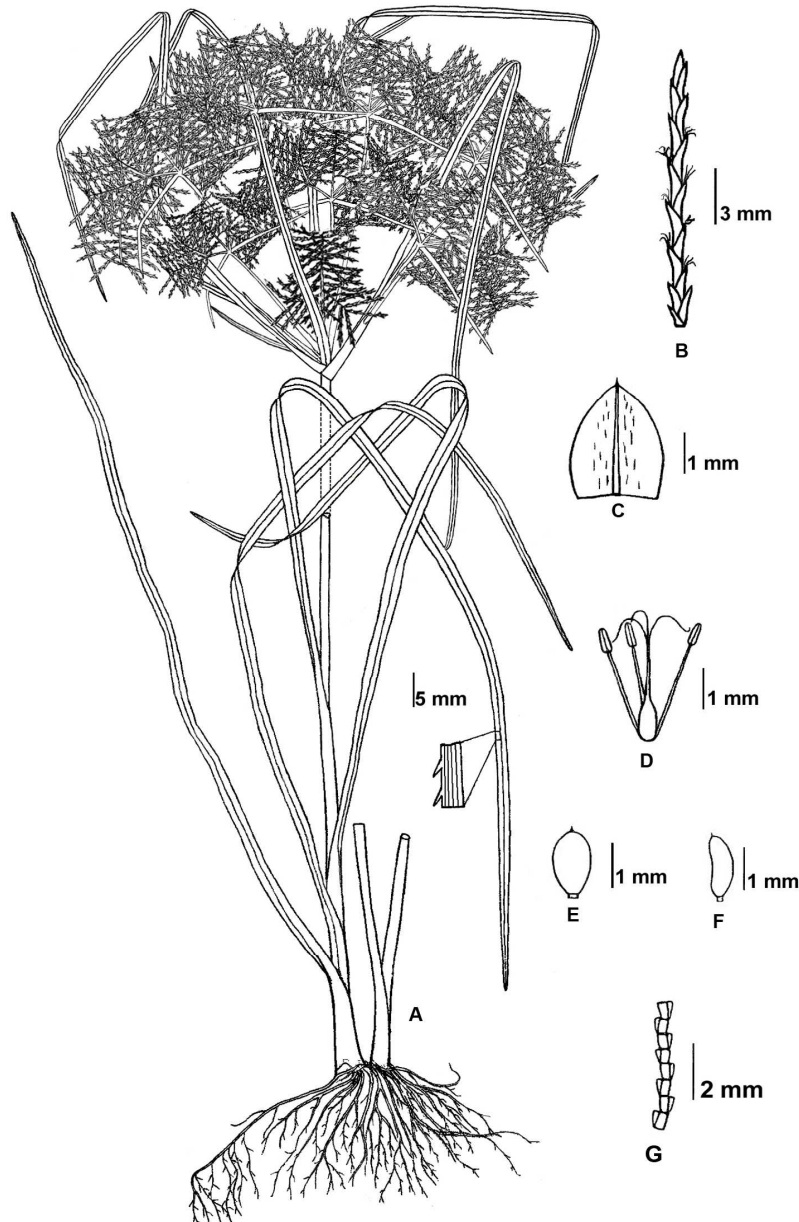


Fig. 1. Illustration of *Cyperus odoratus* L., A Habit, B a spikelet, C Glume, D Pistil and anther, E, F Nut, G Rachilla

Herb (35) 50-80 cm, perennial with much reduced rhizome, culms swollen at base, trigonous at base (1.5 cm diameter), triquetrous towards apex (0.7 cm diameter), glabrous, occasionally strigose at the apex along the edges of triquetrous stem. Leaves 3 – 4 in number from the base, as long as or slightly longer than the stem, inverted 'W' shaped, 50 - 80 cm x 0.9-1.1 cm, sheathing upto 18 cm, margin sharply strigose, apex acute. Inflorescence compound to decompounds, (10 x 13 cm) 15 – 17 x 20 – 28 cm, cone shaped, primary rays 4, secondary rays 4, tertiary rays 4 and at the centre 1, gradually reducing in size towards the centre, bracts alternate, the largest being the outer most 65 x 1.3 cm, smaller inner most 3 cm x 0.5 mm, sheath of rachis of rays tubular, 0.5 – 4 cm x 0.1 – 0.4 cm, apex acute to acuminate, obliquely opening, 10 – 13 flowers, alternately arranged (when young 0.5 cm long with 2-3 flowers), the basal glume sterile. Glume 3 x 2 mm, ovate, apex muranate. Spike cylindrical, 5 x 4 cm, bearing up to 30-50 spikelets, rachis glabrous, 2 mm. Spikelets spicately arranged, linear, 1.5 – 2.3 x 0.1 cm. Spikelet deciduous at maturity, glume persistent, rachilla winged, segments 1.5 x 1 mm, zig-zag, wing covers the seed. Anther 3, 3 mm long, filament 2.2 mm and anther 0.8 mm. Pistil 3.5 mm, carple 1 mm, style 2.5 mm (united 1 mm, trifid 1.5 mm) stigma trifid. Achene brown, 1.5 x 0.7 mm, oblong to obovate, convex, dorsiventrally flattened, stipe 0.1 mm, apex apiculate.

Ecology: It is very closely associated with wet and moist regions of Tropical regions, however the present collection has very peculiar character to highlight their habitat ie. it floats with the help of solid domestic and sewage waste like the plastic bags, sugarcane waste, coconut coir which tent to float on the water for a thickness of 15 – 20 cm.

Distribution:

AFRICA - Equatorial Guinea, Zaire, Benin, Cote D'Ivoire, Ghana, Nigeria, Senegal, Angola, Madagascar; ASIA – Iran, Iraq, Azerbaijan, Japan, Korea, Taiwan, Myanmar, Thailand, Vietnam, Indonesia, Malaysia, Papua New Guinea, Philippines; Australia; Northern and Southern America.

Flowering and Fruiting: Through out the year.

Specimens examined: SJCOT 901, 902, 913, 914, Herbarium of Botany Department, St.Joseph's College, Tiruchirappalli, Tamilnadu.

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